CLAIMS

1. A quality control (QC) probe for inspecting a quality of a microarray, in which an oligonucleotide having a complementary sequence to a base sequence of a target product or having any base sequence is labeled with a fluorescent material, the fluorescent material having different excitation/emission wavelength from a fluorescent material labeled in the target product.

2. The QC probe of claim 1, wherein the fluorescent material is labeled at one or more positions of the base sequence of the oligonucleotide and the position is 3'-end, 5'-end, or the internal position of the QC probe.

3. The QC probe of claim 1, wherein a spacer is further included between the probe sequence and the fluorescent material.

4. The QC probe of claim 1, wherein the fluorescent material is at least one material selected from the group consisting of Pyrene, Cyanine 2, GFP, Calcein, FITC, Alexa 488, FAM, Fluorescein Chlorotriazinyl, Fluorescein, Rhodamine 110, Oregon Green, Magnesium Green, Calcium Green, JOE, Cyanine 3, tetramethylrhodamine, TRITC, TAMRA, Rhodamine Phalloidin, Pyronin Y, Lissamine, ROX, Calcium Crimson, Texas Red, Nile Red, Cyanine 5, and Thiadicarbocyanine.

5. The QC probe of claim 1, which acts as a target probe simultaneously by being labeled with a fluorescent material at one or more positions of the base sequence of an oligonucleotide having a complementary sequence to a base sequence of a target product or a spacer base.

6. A method for fabricating a microarray, the method comprising immobilizing the QC probe of any one of claims 1 to 4 and a target probe mixed at a certain ratio on a support of the microarray or immobilizing the QC probe of claim 5 alone on the support of the microarray.

7. The method of claim 6, wherein the QC probe and the target probe are cDNA, oligonucleotide, peptide or protein.

8. The method of claim 6, wherein the QC probe and the target probe are simultaneously immobilized on one spot.

9. A microarray having the QC probe of any one of claims 1 to 4 and a target probe or the QC probe of claim 5 immobilized thereon.

10. The microarray of claim 9, wherein the QC probe and the target probe are simultaneously immobilized on one spot.

11. The microarray of claim 9, wherein the QC probe has the same base sequence as that of the target probe, but is labeled with a fluorescent material having a different excitation/emission wavelength from a fluorescent material for the target probe.

12. A method of inspecting a quality of a microarray, wherein the microarray of claim 9 is used to perform identifying an immobilization state of probes and/or a hybridization reaction with a target product.

13. The method of claim 12, wherein the immobilization state of probes is identified by a scanning fluorescent signal produced by a fluorescent material labeled in a QC probe before or after a hybridization reaction of the target probe and the target product.

14. The method of claim 12, wherein the hybridization reaction of the target probe and the target product is checked by scanning a fluorescent signal produced by a fluorescent material labeled in the target product after a hybridization reaction of the target probe and the target product.

15. The method of claim 12, wherein a probe labeled with fluorescent materials having different wavelengths each other is used to simultaneously inspect an immobilization state of probes and hybridization reaction with a target product.

16. An oligonucleotide including a Mycobacterium genus-specific internal transcribed spacer (ITS) base sequence for differentiating Mycobacteria strains selected from SEQ ID Nos. 1 and 2.